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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,328	09/16/2003	Satoshi Arakawa	Q77506	9177
23373	7590	04/14/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			HANNAHER, CONSTANTINE	
			ART UNIT	PAPER NUMBER
			2884	

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/662,328		ARAKAWA, SATOSHI	
	<b>Examiner</b>		<b>Art Unit</b>	
	Constantine Hannaher		2884	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>20060228</u> <u>10/14/05</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Claim Rejections - 35 USC § 112**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A claim which claims both an apparatus and method steps of using the apparatus is indefinite. The patent statute recognizes only a process and not any distinction between method steps of using and method steps of making. As a result of the combination of two separate statutory classes of invention, a manufacturer using the claimed method would not know from the claim whether it might also be liable for contributory infringement because later there is a buyer of the completed apparatus. Thus such a claim is not sufficiently precise to provide competitors with an accurate determination of the metes and bounds of protection involved and is ambiguous and properly rejected under section 112, paragraph 2. See *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 77 USPQ2d 1140 (Fed. Cir., 2005).

### **Claim Rejections - 35 USC § 101**

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 8 and 7 are rejected under 35 U.S.C. 101 because claims 8 and 7 are directed to neither a “process” nor a “machine,” but rather embrace or overlap two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of

invention in the alternative only. *Ex parte Lyell*, 17 USPQ2d 1548, 1551 (Bd. Pat. App. & Inter. 1990). Claims 8 and 7 recite method steps of manufacturing while dependent on all the apparatus elements recited in claims 4 and 1. MPEP § 2173.05(p).

### **Claim Rejections - 35 USC § 103**

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-6, 8, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi (US 20020092992A1) in view of Isoda (US 20010015416A1).

With respect to independent claim 1, Izumi discloses a radiation image sensor 50 (Fig. 1) comprising a radiation detector layer 2 formed of a radiation detector material which generates electric charges upon exposure to recording radiation (X-rays) (paragraph [0044]), and an electric signal detector layer formed of detector elements 6 each of which is formed on the surface of a plastic substrate 1 (*e.g.*, paragraph [0052]) for each pixel to detect the electric charges generated at the corresponding pixel in the radiation detector layer, wherein the radiation detector layer 2 and the electric signal detector layer are laminated one on the other (Fig. 1). Although the radiation detector layer in the radiation image sensor of Izumi is a radiation detector material, the provision of a radiation detector layer of the type recited is known as shown by Isoda. Isoda discloses a radiation image sensor 60 (Fig. 6) comprising a radiation detector layer 64 laminated on an electric signal detector layer 67 in which layer 64 is formed of radiation detector particles of the type recited dispersed in a polymer (see paragraphs [0065]-[0067]). In view of the advantages of the polymer

layer with particles dispersed therein over a material layer as described by Isoda (paragraph [0007]), it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the radiation image sensor of Izumi to replace layer 2 therein with a layer 64 as suggested by Isoda.

With respect to dependent claim 2, the radiation detector particles suggested by the radiation image sensor 60 of Isoda are one or more of the recited compositions (paragraph [0066]).

With respect to dependent claim 3, the polymer suggested by the radiation image sensor 60 of Isoda is one or more of the recited types (paragraph [0067]).

With respect to dependent claim 4, the lamination suggested by the radiation image sensor 80 (Fig. 7) of Izumi is by way of conductive resin film 32 (paragraph [0098]) partitioned for respective pixels (paragraph [0097]).

With respect to dependent claims 5 and 6, see the rejections applied against claims 2 and 3.

With respect to dependent claim 8, as best understood, the method of producing a radiation image sensor 80 suggested by Izumi would comprise the steps of forming conductive resin film 32 on each of the detector elements 33 on the electric signal detector layer 28 (paragraph [0099]) and laminating the electric signal detector layer 28 provided with conductive resin film 32 on each of the detector elements 33 on the radiation detector layer 30 (paragraph [0100]).

With respect to dependent claim 7, as best understood, the method of producing a radiation image sensor 50 suggested by Izumi would comprise the steps of forming the radiation detector layer 2 by coating the side of the electric signal detector layer (paragraph [0057]) on which the detector elements 6 are formed. The radiation detector layer 64 suggested by Isoda is fairly described as a dispersion of the radiation detector particles in polymer (paragraph [0099]). The use of a spatula as described by Isoda is the act of coating.

With respect to dependent claim 10, the capacitor 5 in the sensor of Izumi would be formed of a pixel electrode 6, a pixel capacity cell, and an insulating layer because that is how capacitors are formed in sensors of this type and the schematic illustration in Fig. 1 of Izumi represents the recited construction. This is a fact which is capable of instant and unquestionable demonstration as being well-known.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi (US 20020092992A1) and Isoda (US 20010015416A1) as applied to claim 1 above, and further in view of Mori *et al.* (US 20020158208A1).

With respect to dependent claim 9, the disclosures of Izumi and Isoda are schematic regarding the physical embodiment of the suggested sensor. Nevertheless, the provision of a light-shielding box for a radiation sensor cannot be beyond the ordinary skill in the art, if only for sales and marketing purposes or for shipping. Mori *et al.* discloses a radiation image sensor (*e.g.*, Fig. 1) comprising scintillator 1 and solid-state imager 2 which as an apparatus (Fig. 6) is provided with the sensor (note elements 1 and 2 within the apparatus) and a casing of light-shielding material (a light transparent casing would not need a specially identified opening **OP** for radiation transmission) comprising a body **HS<sub>L</sub>** with an open upper side and a removeably mounted lid **HS<sub>U</sub>**. Since it is entirely ordinary that the physical embodiment of a radiation image sensor has various ancillary circuits and connections which Izumi and Isoda show only schematically, and in view of the compact, protective enclosure provided by the housing **HS** of Mori *et al.*, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an apparatus for the radiation image sensor suggested by Izumi and Isoda such that the sensor was provided with a casing of the type suggested by Mori *et al.*, in which the radiation detector layer

suggested by Izumi and Isoda occupied the position of scintillator 1 and the electric signal detector layer suggested by Izumi and Isoda occupied the position of solid state imager 2.

**Response to Submission(s)**

8. The amendment filed February 28, 2006 has been entered.
9. Applicant's arguments filed February 28, 2006 have been fully considered but they are not persuasive.

The radiation detector particles dispersed in a polymer is disclosed by Isoda. The detector elements formed on the surface of a plastic substrate is disclosed by Izumi. The lamination of a radiation detector layer on an electric signal detector layer is also disclosed by Izumi. Thus every element emphasized in the sentence bridging pages 6 and 7 of the remarks submitted on February 28, 2006 is taught by one or the other of the applied references, and the choice of Applicant's representative to deny this cannot be persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., impact resistance) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

For at least the reasons explained above, Applicant is not entitled to a favorable determination of patentability in view of the arguments submitted February 28, 2006.

**Conclusion**

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Constantine Hannaher whose telephone number is (571) 272-2437. The examiner can normally be reached on Monday-Friday with flexible hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Constantine Hannaher  
Primary Examiner